CLAIMS

1. A method for producing a monolayer of molecules on a surface, the method comprising: loading a stamp with seed molecules; transferring seed molecules from the stamp to the surface; and, amplifying the seed molecules via an amplifying reaction to produce the monolayer.

2. A method as claimed in claim 1, wherein the transferring comprises transferring a fraction of the seed molecules loaded on the stamp to the surface.

3. A method as claimed in any preceding claim, wherein the transferring comprises adsorbing the seed molecules to the stamp and adsorbing the seed molecules to the surface, the adsorption of the seed molecules to the stamp being stronger than the adsorption of the seed molecules to the molecules to the surface.

4. A method as claimed in claim 1, wherein the amplifying comprises linear amplification of the seed molecules.

5. A method as claimed in claim 1, wherein the amplifying comprises exponential amplification of the seed molecules.

6. A method as claimed in claim 1, wherein the amplifying comprises directional amplification of the seed molecules.

7. A method as claimed in claim 6, wherein the seed molecules are directionally amplified to form conductive structures.

8. A method as claimed in claim 6, comprising electroless plating the directionally amplified seed molecules with a metal.

9. A method as claimed in claim 6, wherein the directional amplification is controlled by the geometry of the seed molecule.

10. A method as claimed in claim 6, wherein the directional amplification is controlled by application of an external force.

11. A method as claimed in claim 10, wherein the external force comprises an electrical force.

12. A method as claimed in claim 10, wherein the external force comprises an magnetic force.

13. A method as claimed in claim 10, wherein the external force comprises a hydrodynamic force.

14. A method as claimed in claim 1, wherein the amplifying comprises a polymerase chain reaction.

15. A method as claimed in claim 14, wherein the polymerase chain reaction comprises binding at least one primer to the surface.

16. A method as claimed in claim 15, wherein the polymerase chain reaction comprises supplying a primer in solution.

17. A method as claimed in claim 1, wherein the amplifying comprises an in vitro translation system to produce a monolayer of protein.

18. A method as claimed in claim 1, wherein the seed molecules comprise a catalyst center for electroless deposition.

19. A method as claimed in claim 1, comprising binding a catalyst to the seed molecules for electroless deposition.

20. A method as claimed in claim 1, wherein the monolayer protects the surface from etchants.

21. A method as claimed in any preceding claim, wherein the monolayer comprises DNA.

22. A method as claimed in any preceding claim, comprising repeating the transferring and amplifying on plural surfaces before reloading the stamp with seed molecules.

23. A biosensor comprising surface treated with a method as claimed in any preceding claim.